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APPLICANT : SONY CORP;

INVENTOR : FUJIWARA TORU;

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TITLE : NEGATIVE ELECTRODE MATERIAL OF LITHIUM ION SECONDARY BATTERY

ABSTRACT : PROBLEM TO BE SOLVED: To provide a negative electrode material formed of graphitic powder having high crystallinity and a small specific surface area which provides a lithium ion secondary battery having a high utilizing ratio of electrolyte or Li and a large discharge capacity by constituting the negative electrode material of a specified graphitic carbon powder.

SOLUTION: This negative electrode material is formed of a non-spherical graphitic carbon powder having a specific surface area of $1m^2/g$ or less and an interlayer distance d_{002} of 3.352\AA or less. The graphitic carbon powder is obtained by thermally treating, for example, tar and/or pitch (e.g. coal tar rich in aromatic content) at $430\text{-}520^\circ\text{C}$, preferably under a reduced pressure of $10\text{-}100\text{Torr}$, to prepare a bulk mesophase having an optically anisotropic microstructure in which the powder residual quantity in fusing property test is 5wt.% or less, heating and carbonizing it to $700\text{-}1100^\circ\text{C}$ in the atmosphere of an inert gas after pulverization to about several $\mu\text{-}50\mu$, and further baking and graphitizing it at 2500°C or more.

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